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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,680	11/14/2003	John R. Mick JR.	5646-118	2326

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EXAMINER

SCHLIE, PAUL W

ART UNIT PAPER NUMBER

2186

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/714,680	Applicant(s) MICK ET AL.	
	Examiner Paul W. Schlie	Art Unit 2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-8 and 14-17 is/are pending in the application.
- 4a) Of the above claim(s) 1-6, 9-13 and 18-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-8, 14-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/17/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 7-8 and 14-17 have been reviewed as amended, with claims 1-6, 9-13 and 18-20 being canceled (and specification amended as requested).

Response to Arguments

2. Applicant's arguments filed 3/9/06 have been fully considered but they are not persuasive.

As per amended independent claims 7 and 14, and corresponding dependant claims; although as detailed by the applicant that patent 6,424,659 implies an otherwise non-descript necessity for a periodic time base (such as may be provided by a generic hardware counter as commonly known by those of ordinary skill in the art) to enable an externally integrated processor to periodically request the aging of CAM entries from an attached IP-Coprocessor, as opposed to the explicit incorporation of such counters within the IP-Coprocessor as disclosed by the applicant such that CAM entries may be requested to be aged periodically without cooperative support from an attached processor; in view that both disclosures are dependant on mutual cooperation from an attached processor for a variety of other similarly disclosed functionality, and that various alternative SW/HW partitioned embodiments of periodic aging counters and the use of interrupts to notify an attached processor of the availability of requested results are considered likely well understood design choices by those of ordinary skill in the art at the time of that disclosed within patent 6,424,659, and in further view that both the cited patent reference and applicant effectively acknowledge that otherwise obvious design variations are not be construed as altering the sprit or scope of their respective

disclosures, the rejection is sustained (although further clarified in light of the applicant's arguments and corresponding amendments).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 7-8 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mick et al. (US App. 10/714,680) in further view of Viswanadham et al. (6,424,659).

As per claims 7 and 14, Mick et al. acknowledges as prior art an integrated search engine device comprising: an interface with a supervising host NPU processor utilizing mailboxes (which are themselves typically implemented utilizing FIFOs and corresponding interrupt logic to indicate the availability and depth of new messages); a content addressable memory (CAM) core that is configured to support potentially multiple searchable databases and entries therein; and control logic and associated entry aging enable and activity state storage arrays utilized to control and determine the aging beyond some threshold and/or availability of corresponding associated associative database entries within a CAM core; (see prior art figures 1-2A-B); but the disclosed prior art does not explicitly teach that the results of this aging determination may be reported to a supervising NPU host processor, nor that the time base utilized to periodically trigger a request the aging of such entries may be directly incorporated into the integrated search engine. However Viswanadham et al. teaches that aged

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associative database entry status may be explicitly reported to a supervising host (column 19 lines 12-18) upon a periodic request from the same, where in view that both disclosures are dependant on mutual cooperation from an NPU host processor for a variety of other similarly disclosed functionality, and that various alternative SW/HW partitioned embodiments of a periodic aging counter as implied by Viswanadham et al., are considered obvious to one of ordinary skill in the art at the time of the disclosed invention; it is considered obvious to combine that acknowledged by Mick et al. as prior art, with that explicitly taught by Viswanadham et al. in conjunction with that considered an otherwise obvious design choices by those of ordinary skill in the art at the time of the claimed invention, for the benefit of enabling an integrated search engine to periodically age associative database entries such that they may be reported to a corresponding attached cooperative NPU host processor upon their discovery within a search engine device as may be desired to improve network packet processing performance.

As per claims 8 and 15-17, being themselves dependant on claims 7, 14, or dependant claim inclusively, official notice is given that it is considered inherent and/or obvious to one of ordinary skill in the art at the time of the disclosed invention to enable age/availability reporting on a per-entry basis, as for example entries which are deemed permanent would likely be desired to be exempt from aging and/or corresponding reporting within any database they have been associated with, and thereby may be arbitrarily further selectively aged as may be desired within the NPU host processor as may be desired.


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Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul W. Schlie whose telephone number is 571-272-6765, and whose email address is [paul.schlie@uspto.gov]. The examiner can normally be reached on Mon-Thu 8:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim can be reached on 517-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


PIERRE BATAILLE
PRIMARY EXAMINER
4/21/06